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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,033	08/22/2001	Kurt E. Spears	10011893-1	1678

7590 09/03/2003

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EXAMINER

LEURIG, SHARLENE L

ART. UNIT PAPER NUMBER

2879

DATE MAILED: 09/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/938,033	SPEARS, KURT E.
Examiner	Art Unit	
Sharlene Leurig	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 11 July 2003.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 14-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 14-19 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### ***Response to Amendment***

1. The amendment filed on July 11, 2003 has been entered and acknowledged by the Examiner. Claims 1-13 have been cancelled.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 14, 15, 17 and 18 stand rejected under 35 U.S.C. 102(b) as being anticipated by Nakaya et al. (5,998,921) (of record).

Regarding claim 14, Nakaya discloses an illumination source comprising a linear tube comprising a first end and a second end (Figure 7, element 2), the tube having an inner surface with a luminescent substance (5) distributed on it, a longitudinal distribution density of the luminescent substance having a minimum at a first point on the inner surface located in the area where element 2c juts into the discharge space and no luminescent substance is distributed, the tube having a luminescent substance density greater than the minimum at each of a second and third point of the inner surface, the first point longitudinally located between the second and third points.

Regarding claim 15, the luminescent layer (5) is shown as an evenly distributed, homogeneous layer in Figure 7. The second and third points are located opposite each

other, on either side of the area where element 2c juts into the discharge space, which is without a luminescent layer. The second and third points therefore have equivalent luminescent substance distribution densities.

Regarding claim 17, the tube includes a first electrode mount area, where the electrode (4) is mounted in the opening of the left-hand side of the tube (2) and a second electrode mount area, where the electrode (4) is mounted in the opening of the right-hand side of the tube. The second point is longitudinally located between the first point (which is in the area where element 2c juts into the discharge space and there is no luminescent layer) and the first electrode mount area, and is therefore in the area of the luminescent layer (5) on the left-hand side of the tube before element 2c when moving along the tube from left to right. The third point is longitudinally located between the second point and the second electrode mount area, and is therefore in the area on the right-hand side of tube after element 2c when moving along the tube from left to right.

Regarding claim 18, the illumination source is a cold cathode fluorescent lamp. It is considered to be a cold cathode because the electrode is not a heated filament but is supplied with a voltage for illuminating the lamp (column 7, line 32).

#### ***Claim Rejections - 35 USC § 103***

3. Claims 16 and 19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nakaya et al. (5,998,921) (of record) in view of Evans et al. (5,856,726) (of record).

Nakaya discloses an illumination source with all the limitations discussed above, including a luminescent substance formed on the inner surface of the tube, and further discloses a discharge space filled with a rare gas (column 8, line 43).

Nakaya lacks a luminescent substance that is explicitly disclosed as a phosphor and explicit disclosure of the gas used for the rare gas fill.

It is well known in the art to use both phosphors as a luminescent substance and to use xenon as a rare gas fill.

Evans teaches both the use of a phosphor as a luminescent substance (column 6, line 30) and the use of xenon as a rare gas fill (column 6, line 14).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nakaya's illumination source with a phosphor layer for the luminescent layer and with xenon as the rare gas fill, as taught by Evans.

#### ***Response to Arguments***

4. Applicant's arguments filed on July 11, 2003 have been fully considered but they are not persuasive. The applicant has argued that the claimed invention is allowable over Nakaya because Nakaya fails to anticipate the claim limitations of claim 14, specifically the limitation of the tube having a minimum point of longitudinal distribution density between second and third points. The applicant has argued that Nakaya's disclosure of a point in the middle of the discharge tube having no luminescent substance cannot be considered a minimum of longitudinal distribution density of the luminescent substance since "the lack of the substance at the gap can not be accurately

described as a distribution of the substance in accordance with the plain meaning of the term 'distribution" (page 4, last full paragraph). The applicant goes on to cite common definitions of the word "distribution", such as "something distributed".

However, the actual wording of the claim is "the tube . . . having a luminescent substance distributed thereon, a longitudinal distribution density of the luminescent substance having a minimum at a first point of the inner surface". Such wording does not require that the minimum point have luminescent substance distributed thereon, but that the tube itself has a continuum of distributed luminescent substance. Such wording does not preclude a point lacking luminescent material. Hence, Nakaya's disclosure of a point lacking luminescent material can be interpreted as a minimum in the "longitudinal distribution density" of the entire inner tube while not being contrary to the common definition of "distribution". Furthermore, the Nakaya reference does not require the Evans reference for the rejection of claim 14. Therefore the rejection of claim 14 and its dependents is maintained.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharlene Leurig whose telephone number is (703)305-4745. The examiner can normally be reached on Monday through Friday, 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703)305-4794. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Sharlene Leurig  
August 26, 2003

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VIP PATEL  
PRIMARY EXAMINER